AMENDMENTS

Please amend the claims as follows:

1. (currently amended) A multi-channel tunable filter comprising:

a three-dimensional filter material comprising:

a first portion with one or more recorded gratings; and

a second portion without gratings; ~~and~~

~~wherein one or more gratings recorded into three-dimensional filter material~~ wherein each of said gratings is configured to reflect a given wavelength of a light wave and wherein each of said gratings covers a vertical portion of said first portion of said three-dimensional filter material.

2. (original) The filter of claim 1 wherein said three-dimensional filter material is a holographic material.

3. (original) The filter of claim 2 wherein said holographic material is Lithium Niobate.

4. (original) The filter of claim 1 wherein said three-dimensional filter material is a thin-film filter material wherein each of said gratings is configured to reflect all wavelengths of a light wave except a given wavelength.

5. (original) The filter of claim 1 further comprising:

an optical read-head configured to move in a hitless manner between said gratings.

6. (currently amended) The filter of claim 5 wherein said ~~hitless manner comprises:~~ ~~moving said~~ optical read-head is configured to move in a first vertical direction with respect to a face of said three-dimensional filter material from said first portion to said second portion;

~~moving said optical read-head~~ in a horizontal direction with respect to said face ~~of said three-dimensional filter material~~ along said second portion; and

~~moving said optical read-head~~ in a second vertical direction with respect to said face ~~of said three-dimensional filter material~~ from said second portion to said first portion.

7. (original) The filter of claim 1 further comprising:

a fixed optical read-head wherein said filter is configured to move in a hitless manner when said fixed optical read-head reads from different gratings.

8. (currently amended) The filter of claim 7 wherein ~~said hitless manner comprises~~: ~~moving~~ said filter is configured to move in a first vertical direction with respect to said optical read-head whereby said optical read-head points to said face of said three-dimensional filter material at a new position;

~~moving said filter~~ in a horizontal direction with respect to whereby said optical read-head points to said face ~~of said three-dimensional filter material~~ at a new position; and

~~moving said filter~~ in a second vertical direction with respect to said optical read-head whereby said optical read-head points to said face ~~of said three-dimensional filter material~~ at a new position.

9. (original) The filter of claim 5 wherein said optical read-head further comprises: a single fiber collimator and a dual fiber collimator.

10. (original) The filter of claim 9 further comprising:
a first optical fiber attached to said dual fiber collimator; and
a second optical fiber attached to said single fiber collimator.

11. (original) The filter of claim 5 wherein said optical read-head further comprises: two dual fiber collimators.

12. (original) The filter of claim 11 further comprising:
a first optical fiber attached to one of said dual fiber collimators; and
a second optical fiber attached to another one of said dual fiber collimators.

13. (original) The filter of claim 1 wherein said gratings are placed in a continuously varying spacing arrangement.

14. (original) The filter of claim 1 wherein a multiple of said gratings are superimposed at the same location wherein multiple wavelengths are filtered.

15. (original) A method for using a multi-channel tunable filter comprising:
moving an optical read-head in a first vertical direction with respect to a face of a three-dimensional filter material comprising one or more gratings recorded onto said three-dimensional filter material wherein each of said gratings is configured to reflect a given

wavelength of a light wave and wherein each of said gratings covers a vertical portion of said three-dimensional filter material;

moving said optical read-head in a horizontal direction with respect to said face of said three-dimensional filter material; and

moving said optical read-head in a second vertical direction with respect to said face of said three-dimensional filter material.

16. (original) The method of claim 15 wherein said three-dimensional filter material is a holographic material.

17. (original) The method of claim 16 wherein said holographic material is Lithium Niobate.

18. (original) The method of claim 15 wherein said three-dimensional filter material is a thin-film filter material wherein each of said gratings is configured to reflect all wavelengths of a light wave except a given wavelength.

19. (original) The method of claim 15 wherein said optical read-head is fixed and said filter is configured to move in a hitless manner when said fixed optical read-head reads from different gratings.

20. (original) The method of claim 19 wherein said hitless manner comprises:

moving said filter in a first vertical direction with respect to said optical read-head whereby said optical read-head points to said face of said three-dimensional filter material at a new position;

moving said filter in a horizontal direction with respect to said optical read-head whereby said optical read-head points to said face of said three-dimensional filter material at a new position; and

moving said filter in a second vertical direction with respect to optical read-head whereby said optical read-head points to said face of said three-dimensional filter material at a new position.

21. (original) The method of claim 15 wherein said optical read-head further comprises:

a single fiber collimator and a dual fiber collimator.

22. (original) The method of claim 21 further comprising:

attaching a first optical fiber to said dual fiber collimator; and

attaching a second optical fiber to said single fiber collimator.

23. (original) The method of claim 15 wherein said optical read-head further comprises:

two dual fiber collimators.

24. (original) The method of claim 23 further comprising:

attaching a first optical fiber to one of said dual fiber collimators; and

attaching a second optical fiber to another of said dual fiber collimators.

25 - 34. (cancelled)